

- 1 1. A polishing pad for polishing a substrate in a
2 chemical mechanical polishing system, comprising:
3 a polishing surface having a plurality of
4 substantially circular grooves, the grooves having a depth
5 of at least about 0.02 inches, a width of at least about
6 0.015 inches, and a pitch of at least about 0.09 inches.
- 1 2. The polishing pad of claim 1 wherein the
2 grooves are concentrically arranged.
- 1 3. The polishing pad of claim 1 wherein the
2 grooves are uniformly spaced over the polishing surface.
- 1 4. The polishing pad of claim 1 wherein the
2 grooves have a depth between about 0.02 and 0.05 inches.
- 1 5. The polishing pad of claim 4 wherein the
2 grooves have a depth of approximately 0.03 inches.
- 1 6. The polishing pad of claim 1 wherein the
2 grooves have a width between about 0.015 and 0.04 inches.
- 1 7. The polishing pad of claim 6 wherein the
2 grooves have a width of approximately 0.02 inches.
- 1 8. The polishing pad of claim 1 wherein the
2 grooves have a pitch between about 0.09 and 0.24 inches.
- 1 9. The polishing pad of claim 8 wherein the
2 grooves have a pitch of approximately 0.12 inches.
- 1 10. The polishing pad of claim 1 wherein the

1 polishing pad further comprises an upper layer and a lower
2 layer, the grooves being formed in the upper layer.

1 11. The polishing pad of claim 10 wherein the upper
2 layer has a thickness between about 0.06 and 0.12 inches.

1 12. The polishing pad of claim 11 wherein the
2 distance between a bottom portion of the grooves and the
3 lower layer is about 0.04 inches.

1 13. A polishing pad for polishing a substrate in a
2 chemical mechanical polishing system, comprising:

3 a polishing surface having a plurality of
4 substantially circular grooves, the grooves having a depth
5 of approximately 0.03 inches, a width of approximately 0.02
6 inches, and a pitch of approximately 0.12 inches.

1 14. A polishing pad for polishing a substrate in a
2 chemical mechanical polishing system, comprising:

3 a polishing surface having a spiral groove having a
4 depth of at least about 0.02 inches, a width of at least
5 about 0.015 inches, and a pitch of at least about 0.09
6 inches.

1 15. A polishing pad for polishing a substrate in a
2 chemical mechanical polishing system, comprising:

3 a polishing surface having a plurality of grooves
4 separated by partitions, the grooves having a depth of at
5 least about 0.02 inches and a width of at least about 0.015
6 inches and the partitions having a width of at least about
7 0.075 inches, wherein the ratio of the width of the grooves
8 to the partitions is between about 0.10 and 0.25.